



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,432	12/31/2001	Volker Von Drach	VOND3002/REF	3103
23364	7590	06/29/2004	EXAMINER	
BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314			THOMPSON, CAMIE S	
			ART UNIT	PAPER NUMBER
			1774	

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/926,432

Applicant(s)

DRACH ET AL.

Examiner

Camie S Thompson

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed May 10, 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 17-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 17-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Applicant's amendment and accompanying remarks filed May 10, 2004 have been acknowledged.
2. Examiner acknowledges amended claims 1-3, 6, 8-9, 11, 13 and 17-19.
3. Examiner acknowledges newly added claims 21-25.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2, 11, 17 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galati, U.S. Patent Number 4,811,908.

Galati discloses reinforcing fibers such as flax fibers that have a high degree of fibrillation as per instant claims 1-2 and 17 (see column 1, lines 5-11, column 3, lines 30-33 and claim 17).

Additionally, the Galati reference discloses that the highly fibrillated fibers form a large surface area, which is suitable for use in reinforcing friction materials as per instant claim 11 (see abstract and column 4, lines 50-65). The Galati reference does not specifically disclose the fibril fraction as per instant claims 1 and 17. However, this is an optimizable feature. The reference does provide for high branched or fibrillated fibers. Galati provides a clear direction as to what parameters are critical namely the degree of fibrillation and a suggestion as to how the diameter, increased degree of fibrillation and increased surface area for reinforcing properties in re

Art Unit: 1774

O'Farrell 853 F.2d 894, 7 USPQ2d 1673 (Fed. Cir 1988). Although the prior art is silent to the language, "fibril fraction", one skilled in the art would recognize that an increase in the degree of fibrillation would by definition result in a high fibril fraction in re Rau, 177 USPQ 215 (CCPA 1958). The Galati reference discloses the high degree of fibrillation – the superiority and advantage of it. Therefore, it would have been obvious to one of ordinary skill in the art that the fibril fraction of the reinforcing fibers be greater than 3 area percent and less than 50 area percent in order to have fibers with a high degree of fibrillation and superior reinforcing properties. The rejected claims contain a process limitation. Even though product-by-process claims are limited and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art was made by a different process. See MPEP 2113. The manner in which the fibers are fibrillated does not make it a different product. The Galati reference discloses fibrillated flax fibers, as does applicant. Both Galati and applicant disclose reinforcing fibers such as flax fibers that have a high degree of fibrillation. The reinforcing fibers are the same.

6. Claims 1, 3-5, 13, 17-18 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galati, U.S. Patent Number 4,811,908 in view of Foster, U.S. Patent Number 5,240,766.

Galati discloses reinforcing fibers such as flax fibers that have a high degree of fibrillation as per instant claims 1 and 17 (see column 1, lines 5-11, column 3, lines 30-33 and claim 17).

Additionally, the The Galati reference does not specifically disclose the fibril fraction as per

Art Unit: 1774

instant claims 1 and 17. However, this is an optimizable feature. The reference does provide for high branched or fibrillated fibers. Galati provides a clear direction as to what parameters are critical namely the degree of fibrillation and a suggestion as to how the diameter, increased degree of fibrillation and increased surface area for reinforcing properties in re O'Farrell 853 F.2d 894, 7 USPQ2d 1673 (Fed. Cir 1988). Although the prior art is silent to the language, "fibril fraction", one skilled in the art would recognize that an increase in the degree of fibrillation would by definition result in a high fibril fraction in re Rau, 177 USPQ 215 (CCPA 1958). The Galati reference discloses the high degree of fibrillation – the superiority and advantage of it. Therefore, it would have been obvious to one of ordinary skill in the art that the fibril fraction of the reinforcing fibers be greater than 3 area percent and less than 50 area percent in order to have fibers with a high degree of fibrillation and superior reinforcing properties. The Galati reference does not disclose the mixture of reinforcing fibers and aramid fibers and the amount of the vegetable fibers as per instant claim 3. Foster teaches a gasket material that includes a fiber component that is constructed from a fibrillated fiber as per instant claim 13 (see column 2, lines 35-56). Additionally, Foster teaches that the fiber component can be a mixture of fibers such as hemp and aramid as per instant claims 3 and 18 (see column 3, line 43-column 4, line 18). The mixture of aramid and vegetable fibrillated fibers and the amount of vegetable fibers in the mixture affects the processability of the mixture. However, the amount of vegetable fibers in the mixture is optimizable as per instant claims 4 and 5. Discovery of optimum values of a result effective variable involves only routine skill in the art in re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Therefore, it would have been obvious to one of ordinary skill in the art to have a mixture of fibrillated vegetable fibers and aramid fibers wherein the vegetable fibers

Art Unit: 1774

are present in an amount of 10-50 weight percent in order to have fibers that are easily processed so that the fibers provide a structural reinforcement for the composite gasket as shown by Foster in column 2, lines 35-56. The rejected claims contain a process limitation. Even though product-by-process claims are limited and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art was made by a different process. See MPEP 2113. The manner in which the fibers are fibrillated does not make it a different product. The Galati reference discloses fibrillated flax fibers, as does applicant. Both Galati and applicant disclose reinforcing fibers such as flax fibers that have a high degree of fibrillation. The reinforcing fibers are the same.

7. Claims 1, 9-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galati, U.S. Patent Number 4,811,908 in view of Kesevan et al., U.S. Patent Number 6,220,405. Galati discloses reinforcing fibers such as flax fibers that have a high degree of fibrillation as per instant claim 1 (see column 1, lines 5-11, column 3, lines 30-33 and claim 17). Additionally, the Galati reference does not specifically disclose the fibril fraction as per instant claim 1. However, this is an optimizable feature. The reference does provide for high branched or fibrillated fibers. Galati provides a clear direction as to what parameters are critical namely the degree of fibrillation and a suggestion as to how the diameter, increased degree of fibrillation and increased surface area for reinforcing properties in re O'Farrell 853 F.2d 894, 7 USPQ2d 1673 (Fed. Cir 1988). Although the prior art is silent to the language, "fibril fraction", one skilled in

Art Unit: 1774

the art would recognize that an increase in the degree of fibrillation would by definition result in a high fibril fraction in re Rau, 177 USPQ 215 (CCPA 1958). The Galati reference discloses the high degree of fibrillation – the superiority and advantage of it. Therefore, it would have been obvious to one of ordinary skill in the art that the fibril fraction of the reinforcing fibers be greater than 3 area percent and less than 50 area percent in order to have fibers with a high degree of fibrillation and superior reinforcing properties. The Galati reference does not disclose the use of an additive in the friction material as per instant claims 9-10 and 12. Kesavan teaches a friction material that comprises reinforcing fibers and solid lubricants such as tin sulfide (see column 3, lines 44-65). Also, Example 6 of the Kesavan reference discloses that the lubricant is present in an amount of 6 weight percent as per instant claims 10 and 12. The addition of tin sulfide to a friction lining affects the parking-brake friction. Therefore, it would have been obvious to one of ordinary skill in the art to add tin sulfide to the friction material in order to have a lining that is resistant to repeated brake application as shown by Kesavan in column 2, lines 7-19. The rejected claims contain a process limitation. Even though product-by-process claims are limited and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art was made by a different process. See MPEP 2113. The manner in which the fibers are fibrillated does not make it a different product. The Galati reference discloses fibrillated flax fibers, as does applicant. Both Galati and applicant disclose reinforcing fibers such as flax fibers that have a high degree of fibrillation. The reinforcing fibers are the same.

8. Claims 1, 6-8, 17, 19-20 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galati, U.S. Patent Number 4,811,908 in view of Kjelby et al., U.S. Patent Number 5,354,606.

Galati discloses reinforcing fibers such as flax fibers that have a high degree of fibrillation as per instant claims 1 and 17 (see column 1, lines 5-11, column 3, lines 30-33 and claim 17).

Additionally, the Galati reference does not specifically disclose the fibril fraction as per instant claims 1 and 17. However, this is an optimizable feature. The reference does provide for high branched or fibrillated fibers. Galati provides a clear direction as to what parameters are critical namely the degree of fibrillation and a suggestion as to how the diameter, increased degree of fibrillation and increased surface area for reinforcing properties in re O'Farrell 853 F.2d 894, 7 USPQ2d 1673 (Fed. Cir 1988). Although the prior art is silent to the language, "fibril fraction", one skilled in the art would recognize that an increase in the degree of fibrillation would by definition result in a high fibril fraction in re Rau, 177 USPQ 215 (CCPA 1958). The Galati reference discloses the high degree of fibrillation – the superiority and advantage of it.

Therefore, it would have been obvious to one of ordinary skill in the art that the fibril fraction of the reinforcing fibers be greater than 3 area percent and less than 50 area percent in order to have fibers with a high degree of fibrillation and superior reinforcing properties. The Galati reference does not disclose the addition of shives in the mixture of fibers as per instant claims 6-8 and 19-20. Kjelby teaches flax fibers that comprise shives as per instant claim 6 (see Example 1). The shives provide a reinforcing effect. The amount of shives present in the mixture is an optimizable. Discovery of optimum values of result effective variable only involve routine skill



Art Unit: 1774

in the art in re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Therefore, it would have been obvious to one of ordinary skill in the art to have shives added to the flax fibers in the amount less than 75 percent in order to have a fiber mixture that has good mechanical strength. The rejected claims contain a process limitation. Even though product-by-process claims are limited and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art was made by a different process. See MPEP 2113. The manner in which the fibers are fibrillated does not make it a different product. The Galati reference discloses fibrillated flax fibers, as does applicant. Both Galati and applicant disclose reinforcing fibers such as flax fibers that have a high degree of fibrillation. The reinforcing fibers are the same.

### ***Response to Arguments***

9. Applicant's arguments filed May 10, 2004 have been fully considered but they are not persuasive. Applicant argues that the Galati reference does not teach or suggest the present invention. Galati discloses reinforcing fibers that can be flax and have a high degree of fibrillation, as does applicant's reinforcing fibers. Applicant argues that the process used in the Galati reference does not produce satisfactory results. The manner in which the flax fibers are fibrillated does not make the reinforcing fibers different from that of the Galati reference. Also, applicant refers to nylon fiber as producing unsatisfactory results not flax. Applicant admits that

Art Unit: 1774

the Galati process is suitable for fibrillating flax fiber. Applicant argues that the Galati process is unsuitable for other types of fibers such as hemp, sisal, jute and ramie fibers as per instant claims 23 and 24. The manner in which the fibers are fibrillated is not given any patentable weight. Although Galati does not disclose hemp, sisal or jute as reinforcing fibers, the Foster reference does. Foster was brought in to demonstrate that hemp is a fiber used in a reinforcing material. Thus, the Foster and Galati references are analogous art. Applicant argues that a fibril content greater than 3 area percent and less than 50 area percent is achieved using an air grinder. The fibers of the Galati reference achieve a high degree of fibrillation, which would result in a high fibril fraction. Also, the Galati reference discloses the superiority of using a flax fiber with a high degree of fibrillation. Applicant argues that the Galati reference does not include fibrillation in air. The method in which the fibrillation is achieved does not make the fibrillated flax fibers of the Galati reference different from the flax reinforcing fibrillated fibers of the present invention. Both applicant and Galati have fibrillated flax fibers with a high degree of fibrillation. Applicant argues the combination of the Galati and Keseven references. Both Galati and Kesevan incorporate reinforcing fibers. Thus, Galati and Keseven are analogous art. The Kesevan reference is brought in to demonstrate that additives are used with reinforcing fibers in order to affect friction in the material. And, thus the combination is not without motivation. Also, applicant argues the combination of the Galati and Kjelby references. Both Galati and Kjelby use flax fibers, and thus is analogous art. The addition of shives to the flax fiber increases the strength of the fibers. Therefore, the combination is not without motivation. The rejections are maintained.

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (571) 272-1530. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly, can be reached at (571) 272-1526. The fax phone number for the Group is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CYNTHIA H. KELLY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700

*Cynthia H. Kelly*